



**EMISSION PARTNER**

clean air is our ~~engine~~

*caffeine!*



# CATALYSTS FOR COFFEE ROASTING SYSTEMS

Emission Partner is one of the leading suppliers of products and services with **15 years of experience** in the field of exhaust air aftertreatment. We help you **to improve air quality** and **fulfil legal environmental requirements**.

# EXHAUST AIR EMISSIONS FROM COFFEE ROASTING SYSTEMS

Exhaust air aftertreatment in coffee roasting systems and coffee roasters is an important issue, as the roasting process releases considerable emissions of pollutants. These are often reduced by using a **catalyst**.

Emissions during coffee roasting are significantly influenced by the **degree of roasting**, the **roasting process** and the **type of coffee bean**. Darker roasts and beans with a high oil content, such as Robusta, tend to lead to higher emissions of VOCs and carbon monoxide. Modern roasting processes and **emission reduction technologies from Emission Partner** can significantly reduce these emissions.



## ENVIROMENTAL ASPECTS AND REGULATIONS

Emissions from coffee roasting systems are subject to **strict environmental regulations**, depending on the size of the roasting plant and local legislation. In Germany the **TA Luft** regulates the permissible emission values for plants.

Limit values from TA Luft for roasting systems	Generally applicable for inorganic substances (with post-combustion)	Generally applicable for organic substances
Formaldehyde: <15mg/Nm <sup>3</sup>	CO: <100 mg/Nm <sup>3</sup> with TNV or catalyst	Total C: <50 mg/Nm <sup>3</sup>
NO <sub>x</sub> : <350 mg/Nm <sup>3</sup>	NO <sub>x</sub> : <100 mg/Nm <sup>3</sup>	VOC: <20 mg/Nm <sup>3</sup>

# CATALYTIC POST-COMBUSTION

- **How it works:** Works at lower temperatures (approx. 300-400 °C) and uses a catalyst (often precious metals such as platinum or palladium) to accelerate the oxidation of pollutants. VOCs and other pollutants are converted into CO<sub>2</sub> and H<sub>2</sub>O.
- **Advantages:** Significantly lower energy consumption compared to thermal post-combustion, as the reaction can take place at lower temperatures due to the catalyst.
- **Efficiency:** Particularly effective in reducing carbon monoxide, formaldehyde, VOCs and odours. NO<sub>x</sub> emissions can also be reduced.



Further information  
on coffee roasting

# EMISSION PARTNER

Your Partner for exhaust air aftertreatment  
of roasting systems

## Our service for you

On-site measurement  
emission measurement  
in advance

Catalyst production  
Made in Germany

Accredited  
emission  
measurement

Mounting the  
catalysts

Analysing the  
results

Recycling the  
catalysts



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